IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT(S):	BAE, Beom-Sik et al.	**GROUP ART UNIT:** 2616
APPLICATION NO.:	09/892,973	**EXAMINER:** SHAH, Chirag G.
FILING DATE:	June 27, 2001	**DATED:** March 7, 2008

FOR: **METHOD AND APPARATUS FOR CONTROLLING PACKET TRANSMISSION IN A MOBILE COMMUNICATION SYSTEM**

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

REAL PARTY IN INTEREST

The real party in interest is Samsung Electronics Co, Ltd, the assignee of the subject application, having an office at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea.

RELATED APPEALS AND INTERFERENCES

To the best of Appellants' knowledge and belief, there are no currently pending related appeals, interferences or judicial proceedings.

STATUS OF CLAIMS

Original Claims 1-56 were filed on June 27, 2001. Claims 16-18, 24-28, 44-46 and 52-56 were canceled in an amendment filed on May 9, 2005. Claims 1, 3-6, 8, 9, 11-13, 15, 19, 21, 23, 29, 31-34, 36, 37, 39-41, 43, 47, 49 and 51 were amended in an amendment filed on June 20, 2006.

Claims 1, 5, 9 and 13 were amended in an amendment filed on December 1, 2006. Claims 1, 9, 19, 29, 37 and 47 were amended in an amendment filed on July 25, 2007. Claims 1-15, 19-23, 29-43 and 47-51 are pending in the application, with Claims 1, 9, 19, 29, 37 and 47 being independent claims. Claims 1-6, 9-13, 29-34, 37-41 and 47-49 stand finally rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,574,211 B2 to "Padovani" in view of U.S. Patent No. 6,425,105 B1 to "Piirainen". Claims 7, 8, 14, 15, 22, 23, 35, 36, 42, 43, 50 and 51 remain objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Thus, Claims 1-15, 19-23, 29-43 and 47-51 are pending in the Appeal. Claims 1, 9, 19, 29, 37 and 47 are in independent form. For the purposes of this appeal, Claims 1-6 stand or fall together, Claims 9-13 stand or fall together, Claims 29-34 stand or fall together, Claims 37-41 stand or fall together, Claims 47-49 stand or fall together, and Claims 7, 8, 14, 15, 22, 23, 35, 36, 42, 43, 50 and 51 each stand or fall alone.

STATUS OF AMENDMENTS

An Office Action marked "Final" was mailed on August 8, 2007. A response to the August 8, 2007 Office Action was filed on November 20, 2007 with no amendments to the claims. An Advisory Action was mailed on December 21, 2007 that indicated, in item 7, that the proposed amendments allegedly filed in the response of November 20, 2007 will be entered, and, in item 11, that the request for reconsideration had been considered but did not place the application in condition for allowance. A Notice of Appeal was filed on January 8, 2008. Claims 1-15, 19-23, 29-43 and 47-51 are under appeal.

SUMMARY OF CLAIMED SUBJECT MATTER

The invention as recited in Claim 1 relates to a method of controlling transmission of a data packet from an access network (AN) in an access terminal (AT) of a mobile telecommunication system where the AN transmits the data packet in successive time slots, each slot having a plurality of data bits, and the AT receives the data packet from the AN. FIGs. 5-8, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23,

through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The method of Claim 1 includes the step of comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold. FIGS. 5 and 8, Specification at page 5, lines 18-20, page 7, lines 25-26, page 12, lines 17-19, page 13, lines 14-21, page 14, lines 5-10, page 15, lines 16-19 and 24-27, and page 31, lines 6-7. Support may be found elsewhere in the specification.

The method of Claim 1 also includes the step of selectively checking for errors in the data packet in a received time slot according to whether the received C/I is greater than the first threshold. FIGS. 5 and 8, Specification at page 5, lines 20-21, page 8, lines 9-12, page 14, lines 8-10, and page 31, lines 7-8. Support may be found elsewhere in the specification.

The method of Claim 1 also includes the step of transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet after said checking. FIG. 5 and 8, Specification at page 1, lines 16-21, page 5, lines 21-23, from page 8, lines 14, through page 9, line 5, page 11, lines 2-4, page 13, lines 1-4, page 14, lines 12-17, from page 28, through page 15, line 11, and page 31, lines 9-10. Support may be found elsewhere in the specification.

The invention as recited in Claim 9 relates to a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN. FIGs. 5-8, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23, through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The method of Claim 9 includes the step of comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold. FIGS. 5 and 8, Specification at page 5, lines 18-20, page 7, lines 25-26, page 12, lines 17-19, page 13, lines 14-21, page 14, lines 5-10, page 15, lines 16-19 and 24-27, and page 31, lines 6-7. Support may be found elsewhere in the specification. Support may be found elsewhere in the specification.

The method of Claim 9 also includes the step of selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold. FIGS. 5 and 8, Specification at page 5, lines 20-21, page 8, lines 9-12, page 14, lines 8-10, and page 31, lines 7-8. Support may be found elsewhere in the specification.

The method of Claim 9 also includes the step of transmitting a signal requesting termination of retransmission of the data packet to the AN if the received C/I is greater than the first threshold. FIG. 5 and 8, Specification at page 1, lines 16-21, page 5, lines 21-23, from page 8, lines 14, through page 9, line 5, page 11, lines 2-4, page 13, lines 1-4, page 14, lines 12-17, from page 28, through page 15, line 11, and page 31, lines 9-10. Support may be found elsewhere in the specification.

The invention as recited in Claim 19 relates to a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN. FIGs. 5-8, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23, through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The method of Claim 19 also includes the step of comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold. FIGS. 5 and 8, Specification at page 5, lines 18-20, page 7, lines 25-26, page 12, lines 17-19, page 13, lines 14-21, page 14, lines 5-10, page 15, lines 16-19 and 24-27, and page 31, lines 6-7. Support may be found elsewhere in the specification. Support may be found elsewhere in the specification.

The method of Claim 19 also includes the step of selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold. FIGS. 5 and 8, Specification at page 5, lines 20-21, page 8, lines 9-12, page 14, lines 8-10, and page 31, lines 7-8. Support may be found elsewhere in the specification.

The method of Claim 19 also includes the step of determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold. FIGs. 5-8, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23, through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The method of Claim 19 also includes the step of requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN. FIG. 5 and 8, Specification at page 1, lines 16-21, page 5, lines 21-23, from page 8, lines 14, through page 9, line 5, page 11, lines 2-4, page 13, lines 1-4, page 14, lines 12-17, from page 28, through page 15, line 11, and page 31, lines 9-10. Support may be found elsewhere in the specification.

The invention as recited in Claim 29 relates to an apparatus for controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN. FIGs. 5-8, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23, through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The apparatus of Claim 29 includes a device for comparing a C/I of a forward pilot signal received from the AN with a predetermined first threshold. FIGS. 5, 7 and 8, Specification at page 5, lines 18-20, page 7, lines 25-26, page 12, lines 17-19, page 13, lines 14-21, page 14, lines 5-10, page 15, lines 16-19 and 24-27, and page 31, lines 6-7. Support may be found elsewhere in the specification.

The apparatus of Claim 29 also includes a device for decoding a data packet in a received time slot and selectively checking for errors in the decoded data packet according to whether the received C/I is greater than the first threshold. FIGS. 5, 7 and 8, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23, through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The apparatus of Claim 29 also includes a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. FIG. 5, 7 and 8, Specification at page 1, lines 16-21, page 5, lines 21-23, from page 8, lines 14, through page 9, line 5, page 11, lines 2-4, page 13, lines 1-4, page 14, lines 12-17, from page 28, through page 15, line 11, and page 31, lines 9-10. Support may be found elsewhere in the specification.

The invention as recited in Claim 37 relates to an apparatus for controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN. FIGS. 5 and 7, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23, through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The apparatus of Claim 37 includes a device for comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold. FIGS. 5, 7 and 8, Specification at page 5, lines 18-20, page 7, lines 25-26, page 12, lines 17-19, page 13, lines 14-21, page 14, lines 5-10, page 15, lines 16-19 and 24-27, and page 31, lines 6-7. Support may be found elsewhere in the specification. Support may be found elsewhere in the specification.

The apparatus of Claim 37 also includes a device for selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold. FIGS. 5, 7 and 8, Specification at page 5, lines 20-21, page 8, lines 9-12, page 14, lines 8-10, and page 31, lines 7-8. Support may be found elsewhere in the specification.

The apparatus of Claim 37 also includes a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if the received C/I is greater than the first threshold. FIG. 5, 7 and 8, Specification at page 1, lines 16-21, page 5, lines 21-23, from page 8, lines 14, through page 9, line 5, page 11, lines 2-4, page 13, lines 1-4, page 14, lines 12-17, from page 28, through page 15, line 11, and page 31, lines 9-10. Support may be found elsewhere in the specification.

The invention as recited in Claim 47 relates to an apparatus for controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN. FIGs. 5-8, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23, through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The apparatus of Claim 47 includes a device for comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold. FIGS. 5 and 8, Specification at

page 5, lines 18-20, page 7, lines 25-26, page 12, lines 17-19, page 13, lines 14-21, page 14, lines 5-10, page 15, lines 16-19 and 24-27, and page 31, lines 6-7. Support may be found elsewhere in the specification. Support may be found elsewhere in the specification.

The apparatus of Claim 47 also includes a device for selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold. FIGS. 5, 7 and 8, Specification at page 5, lines 20-21, page 8, lines 9-12, page 14, lines 8-10, and page 31, lines 7-8. Support may be found elsewhere in the specification.

The apparatus of Claim 47 also includes a device for determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold. FIGS. 5, 7 and 8, Specification at page 1, lines 18-21, page 5, lines 15-23, page 7, lines 6-16, page 12, lines 12-27, from page 13, line 23, through page 14, line 3, page 15, lines 7-11, and page 31, lines 3-6. Support may be found elsewhere in the specification.

The apparatus of Claim 47 also includes a device for requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN. FIGS. 5, 7 and 8, Specification at page 1, lines 16-21, page 5, lines 21-23, from page 8, lines 14, through page 9, line 5, page 11, lines 2-4, page 13, lines 1-4, page 14, lines 12-17, from page 28, through page 15, line 11, and page 31, lines 9-10. Support may be found elsewhere in the specification.

GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

Whether Claims 1-6 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,574,211 B2 to "Padovani" in view of U.S. Patent No. 6,425,105 B1 to "Piirainen".

Whether Claims 9-13 are unpatentable under 35 U.S.C. § 103(a) over Padovani in view of Piirainen.

Whether Claims 29-34 are unpatentable under 35 U.S.C. § 103(a) over Padovani in view of Piirainen.

Whether Claims 37-41 are unpatentable under 35 U.S.C. § 103(a) over Padovani in view of Piirainen.

Whether Claims 47-49 are unpatentable under 35 U.S.C. § 103(a) over Padovani in view of Piirainen.

ARGUMENT

1. Claims 1-6 are patentable over Padovani in view of Piirainen

Claims 1-6 were said to be unpatentable over Padovani in view of Piirainen.

Independent Claim 1 relates to a method of controlling a reverse data rate in a mobile station after receiving forward information commanding a reverse data rate change on a forward channel from a base station.

Independent Claim 1 recites, in part, a method of controlling transmission of a data packet from an access network (AN) in an access terminal (AT) of a mobile telecommunication system where the AN transmits the data packet in successive time slots, each slot having a plurality of data bits, and the AT receives the data packet from the AN, the method comprising the steps of: comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; selectively checking for errors in the data packet in a received time slot according to whether the received C/I is greater than the first threshold; and transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet after said checking.

The present invention is directed to a method and apparatus for increasing a channel adaptation speed and as a result, increasing throughput in both a link adaptation and an Automatic Repeat reQuest (ARQ) mobile telecommunication system.

The Examiner concedes that Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner states that Piirainen teaches automatic repeat request to request a retransmission of the corrupted data, and that Piirainen discloses, in col. 1, lines 28-38, that the receiver sends a NAK signal to request a retransmission of a coded signal block detected in error and the receiver sends an ACK signal to acknowledge a correct reception. The Examiner asserts that it would have been obvious to one of ordinary skill in the art to modify Padovani to include the alleged suggestions of Piirainen.

Padovani describes a method and apparatus for high rate packet data transmission. Data transmission on the forward link is time multiplexed and the base station transmits at the highest data rate supported by the forward link at each time slot to one mobile station. The data rate is

determined by the largest C/I measurement of the forward link signals as measured at the mobile station. Piirainen describes a bidirectional ARQ apparatus and method.

As conceded by the Examiner, Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner alleges that termination of retransmission is disclosed in Piirainen in col. 1, lines 28-38.

Piirainen describes three conventional ARQ strategies including (i) Stop-and-Wait, (ii) Go-Back-N (GBN), and (iii) Selective Repeat. Piirainen teaches against the use of the Stop-and-Wait strategy because the efficiency of transmission is low since a confirmation of the received signal is made for every block of data. Furthermore, one skilled in the art would not be motivated to use the Stop-and-Wait strategy because higher delays can occur even when acknowledgement immediately follows data blocks.

Piirainen teaches against the GBN strategy because data blocks are retransmitted starting from the missing data block, including data blocks that were received correctly. Accordingly, one skilled in the art would not be motivated to use the GBN strategy because the GBN strategy makes inefficient use of the wireless medium and it is possible for data blocks that are successfully received to get retransmitted multiple times merely because a previous data block failed more than once.

Piirainen teaches against the Selective Repeat strategy because the management of the order retransmitted data blocks is more complicated for the Selective Repeat strategy compared to other systems. For example, the receiver has to buffer out-of-order data blocks so they can be delivered to higher orders in order.

Piirainen fails to supplement the deficiencies of Padovani because Piirainen merely describes a conventional process of automatically requesting retransmission of corrupted data in col. 1, lines 28-38, and nowhere suggests transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet, as recited in the claims.

One skilled in the art would not be motivated to modify Padovani with Piirainen because Piirainen discloses conventional ARQ strategies that Piirainen expressly teaches against using. Furthermore, Piirainen nowhere suggests, in col. 1, lines 28-38, or anywhere else, a condition for

termination of retransmission, such as comparing a C/I with a threshold, as in the present invention, as erroneously purported by the Examiner.

In contrast, the present invention uses received C/I when determining whether to decode data or determining whether to transmit a signal requesting retransmission/termination of retransmission before decoding data. The present invention also selectively checks for errors in the data packet according to whether the received C/I is greater than the first threshold, which is found nowhere in Padovani, Piirainen, or any combination thereof.

The Examiner has failed to establish a *prima facie* case of obviousness of the claims because any combination of Padovani and Piirainen fails to arrive at the recitations in the claims.

More particularly, Padovani, Piirainen, or any combination thereof, fails to teach or reasonably suggest a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots, each slot having a plurality of data bits, and the AT receives the data packet from the AN, the method comprising the steps of: comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; selectively checking for errors in the data packet in a received time slot according to whether the received C/I is greater than the first threshold; and transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet after said checking, as recited in Claim 1.

Accordingly, independent Claim 1 is allowable over Padovani, Piirainen, or any combination thereof.

While not conceding the patentability of the dependent claims, *per se*, Claims 2-6 are also allowable for at least the above reasons.

The Examiner has failed to establish a *prima facie* case of obviousness of Claims 1-6 for at least these reasons.

2. Claims 9-13 are patentable over Padovani in view of Piirainen

Claims 9-13 were said to be unpatentable over Padovani in view of Piirainen.

Independent Claim 9 relates to a method of controlling a reverse data rate in a mobile station after receiving forward information commanding a reverse data rate change on a forward channel from a base station.

Independent Claim 9 recites, in part, a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the method comprising the steps of: comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; and transmitting a signal requesting termination of retransmission of the data packet to the AN if the received C/I is greater than the first threshold.

The present invention is directed to a method and apparatus for increasing a channel adaptation speed and as a result, increasing throughput in both a link adaptation and an ARQ mobile telecommunication system.

The Examiner concedes that Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner states that Piirainen teaches automatic repeat request to request a retransmission of the corrupted data, and that Piirainen discloses, in col. 1, lines 28-38, that the receiver sends a NAK signal to request a retransmission of a coded signal block detected in error and the receiver sends an ACK signal to acknowledge a correct reception. The Examiner asserts that it would have been obvious to modify Padovani to include the alleged suggestions of Piirainen.

Padovani describes a method and apparatus for high rate packet data transmission. Data transmission on the forward link is time multiplexed and the base station transmits at the highest data rate supported by the forward link at each time slot to one mobile station. The data rate is determined by the largest C/I measurement of the forward link signals as measured at the mobile station. Piirainen describes a bidirectional ARQ apparatus and method.

As conceded by the Examiner, Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner alleges that termination of retransmission is disclosed in Piirainen in col. 1, lines 28-38.

As discussed above, Piirainen describes three conventional ARQ strategies including (i) Stop-and-Wait, (ii) Go-Back-N (GBN), and (iii) Selective Repeat. Piirainen teaches against the use of the Stop-and-Wait strategy because the efficiency of transmission is low since a confirmation of the received signal is made for every block of data. Furthermore, one skilled in the art would not be motivated to use the Stop-and-Wait strategy because higher delays can occur even when acknowledgement immediately follows data blocks.

Piirainen teaches against the GBN strategy because data blocks are retransmitted starting from the missing data block, including data blocks that were received correctly. Accordingly, one skilled in the art would not be motivated to use the GBN strategy because the GBN strategy makes inefficient use of the wireless medium and it is possible for data blocks that are successfully received to get retransmitted multiple times merely because a previous data block failed more than once.

Piirainen teaches against the Selective Repeat strategy because the management of the order retransmitted data blocks is more complicated for the Selective Repeat strategy compared to other systems. For example, the receiver has to buffer out-of-order data blocks so they can be delivered to higher orders in order.

Piirainen fails to supplement the deficiencies of Padovani because Piirainen merely describes a conventional process of automatically requesting retransmission of corrupted data in col. 1, lines 28-38, and nowhere suggests transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet, as recited in the claims.

One skilled in the art would not be motivated to modify Padovani with Piirainen because Piirainen only discloses conventional ARQ strategies that Piirainen expressly teaches against using. Furthermore, Piirainen nowhere suggests, in col. 1, lines 28-38, or anywhere else, a condition for termination of retransmission, such as comparing a C/I with a threshold, as in the present invention, as erroneously purported by the Examiner.

In contrast, the present invention uses received C/I when determining whether to decode data or determining whether to transmit a signal requesting retransmission/termination of retransmission before decoding data. The present invention also selectively checks for errors in

the data packet according to whether the received C/I is greater than the first threshold, which is found nowhere in Padovani, Piirainen, or any combination thereof.

The Examiner has failed to establish a *prima facie* case of obviousness of the claims because any combination of Padovani and Piirainen fails to arrive at the recitations in the claims.

More particularly, Padovani, Piirainen, or any combination thereof, fails to teach or reasonably suggest a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the method comprising the steps of: comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; and transmitting a signal requesting termination of retransmission of the data packet to the AN if the received C/I is greater than the first threshold, as recited in Claim 9.

Accordingly, independent Claim 9 is allowable over Padovani, Piirainen, or any combination thereof.

While not conceding the patentability of the dependent claims, *per se*, Claims 10-13 are also allowable for at least the above reasons.

The Examiner has failed to establish a *prima facie* case of obviousness of Claims 9-13 for at least these reasons.

3. Claims 19-23 are patentable over Padovani in view of Piirainen

Claims 19-23 were said to be unpatentable over Padovani in view of Piirainen.

Independent Claim 19 relates to methods of controlling a reverse data rate in a mobile station after receiving forward information commanding a reverse data rate change on a forward channel from a base station.

Independent Claim 19 recites, in part, a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the method comprising the steps of: comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; selectively

checking for errors in the data packet according to whether the received C/I is greater than the first threshold; determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold; and requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN.

The present invention is directed to a method and apparatus for increasing a channel adaptation speed and as a result, increasing throughput in both a link adaptation and an ARQ mobile telecommunication system.

The Examiner concedes that Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner states that Piirainen teaches automatic repeat request to request a retransmission of the corrupted data, and that Piirainen discloses, in col. 1, lines 28-38, that the receiver sends a NAK signal to request a retransmission of a coded signal block detected in error and the receiver sends an ACK signal to acknowledge a correct reception. The Examiner asserts that it would have been obvious to modify Padovani to include the alleged suggestions of Piirainen.

Padovani describes a method and apparatus for high rate packet data transmission. Data transmission on the forward link is time multiplexed and the base station transmits at the highest data rate supported by the forward link at each time slot to one mobile station. The data rate is determined by the largest C/I measurement of the forward link signals as measured at the mobile station. Piirainen describes a bidirectional ARQ apparatus and method.

As conceded by the Examiner, Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner alleges that termination of retransmission is disclosed in Piirainen in col. 1, lines 28-38.

As discussed above, Piirainen describes three conventional ARQ strategies including (i) Stop-and-Wait, (ii) Go-Back-N (GBN), and (iii) Selective Repeat. Piirainen teaches against the use of the Stop-and-Wait strategy because the efficiency of transmission is low since a confirmation of the received signal is made for every block of data. Furthermore, one skilled in the art would not be motivated to use the Stop-and-Wait strategy because higher delays can occur even when acknowledgement immediately follows data blocks.

Piirainen teaches against the GBN strategy because data blocks are retransmitted starting from the missing data block, including data blocks that were received correctly. Accordingly, one skilled in the art would not be motivated to use the GBN strategy because the GBN strategy makes inefficient use of the wireless medium and it is possible for data blocks that are successfully received to get retransmitted multiple times merely because a previous data block failed more than once.

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Piirainen fails to supplement the deficiencies of Padovani because Piirainen merely describes a conventional process of automatically requesting retransmission of corrupted data in col. 1, lines 28-38, and nowhere suggests transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet, as recited in the claims.

One skilled in the art would not be motivated to modify Padovani with Piirainen because Piirainen only discloses conventional ARQ strategies that Piirainen expressly teaches against using. Furthermore, Piirainen nowhere suggests, in col. 1, lines 28-38, or anywhere else, a condition for termination of retransmission, such as comparing a C/I with a threshold, as in the present invention, as erroneously purported by the Examiner.

In contrast, the present invention uses received C/I when determining whether to decode data or determining whether to transmit a signal requesting retransmission/termination of retransmission before decoding data. The present invention also selectively checks for errors in the data packet according to whether the received C/I is greater than the first threshold, which is found nowhere in Padovani, Piirainen, or any combination thereof.

The Examiner has failed to establish a *prima facie* case of obviousness of the claims because any combination of Padovani and Piirainen fails to arrive at the recitations in the claims.

More particularly, Padovani, Piirainen, or any combination thereof, fails to teach or reasonably suggest a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time

slots each having a plurality of data bits and the AT receives the data packet from the AN, the method comprising the steps of: comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold; and requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN, as recited in Claim 19.

Accordingly, independent Claim 19 is allowable over Padovani, Piirainen, or any combination thereof.

While not conceding the patentability of the dependent claims, *per se*, Claims 20-23 are also allowable for at least the above reasons.

The Examiner has failed to establish a *prima facie* case of obviousness of Claims 19-23 for at least these reasons.

4. Claims 29-34 are patentable over Padovani in view of Piirainen

Claims 29-34 were said to be unpatentable over Padovani in view of Piirainen.

Independent Claim 29 relates to methods of controlling a reverse data rate in a mobile station after receiving forward information commanding a reverse data rate change on a forward channel from a base station.

Independent Claim 29 recites, in part, a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the method comprising the steps of: comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold; and requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN.

The present invention is directed to a method and apparatus for increasing a channel adaptation speed and as a result, increasing throughput in both a link adaptation and an ARQ mobile telecommunication system.

The Examiner concedes that Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner states that Piirainen teaches automatic repeat request to request a retransmission of the corrupted data, and that Piirainen discloses, in col. 1, lines 28-38, that the receiver sends a NAK signal to request a retransmission of a coded signal block detected in error and the receiver sends an ACK signal to acknowledge a correct reception. The Examiner asserts that it would have been obvious to modify Padovani to include the alleged suggestions of Piirainen.

Padovani describes a method and apparatus for high rate packet data transmission. Data transmission on the forward link is time multiplexed and the base station transmits at the highest data rate supported by the forward link at each time slot to one mobile station. The data rate is determined by the largest C/I measurement of the forward link signals as measured at the mobile station. Piirainen describes a bidirectional ARQ apparatus and method.

As conceded by the Examiner, Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner alleges that termination of retransmission is disclosed in Piirainen in col. 1, lines 28-38.

As discussed above, Piirainen describes three conventional ARQ strategies including (i) Stop-and-Wait, (ii) Go-Back-N (GBN), and (iii) Selective Repeat. Piirainen teaches against the use of the Stop-and-Wait strategy because the efficiency of transmission is low since a confirmation of the received signal is made for every block of data. Furthermore, one skilled in the art would not be motivated to use the Stop-and-Wait strategy because higher delays can occur even when acknowledgement immediately follows data blocks.

Piirainen teaches against the GBN strategy because data blocks are retransmitted starting from the missing data block, including data blocks that were received correctly. Accordingly, one skilled in the art would not be motivated to use the GBN strategy because the GBN strategy makes inefficient use of the wireless medium and it is possible for data blocks that are

successfully received to get retransmitted multiple times merely because a previous data block failed more than once.

Piirainen teaches against the Selective Repeat strategy because the management of the order retransmitted data blocks is more complicated for the Selective Repeat strategy compared to other systems. For example, the receiver has to buffer out-of-order data blocks so they can be delivered to higher orders in order.

Piirainen fails to supplement the deficiencies of Padovani because Piirainen merely describes a conventional process of automatically requesting retransmission of corrupted data in col. 1, lines 28-38, and nowhere suggests transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet, as recited in the claims.

One skilled in the art would not be motivated to modify Padovani with Piirainen because Piirainen only discloses conventional ARQ strategies that Piirainen expressly teaches against using. Furthermore, Piirainen nowhere suggests, in col. 1, lines 28-38, or anywhere else, a condition for termination of retransmission, such as comparing a C/I with a threshold, as in the present invention, as erroneously purported by the Examiner.

In contrast, the present invention uses received C/I when determining whether to decode data or determining whether to transmit a signal requesting retransmission/termination of retransmission before decoding data. The present invention also selectively checks for errors in the data packet according to whether the received C/I is greater than the first threshold, which is found nowhere in Padovani, Piirainen, or any combination thereof.

The Examiner has failed to establish a *prima facie* case of obviousness of the claims because any combination of Padovani and Piirainen fails to arrive at the recitations in the claims.

More particularly, Padovani, Piirainen, or any combination thereof, fails to teach or reasonably suggest a method of controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the method comprising the steps of: comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; determining a data rate

corresponding to the received C/I if the received C/I is less than or equal to the first threshold; and requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN, as recited in Claim 29.

Accordingly, independent Claim 29 is allowable over Padovani, Piirainen, or any combination thereof.

While not conceding the patentability of the dependent claims, *per se*, Claims 30-34 are also allowable for at least the above reasons.

The Examiner has failed to establish a *prima facie* case of obviousness of Claims 29-34 for at least these reasons.

5. Claims 37-41 are patentable over Padovani in view of Piirainen

Claims 37-41 were said to be unpatentable over Padovani in view of Piirainen.

Independent Claims 37 relates to a method of controlling a reverse data rate in a mobile station after receiving forward information commanding a reverse data rate change on a forward channel from a base station.

Independent Claim 37 recites, in part, an apparatus for controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the apparatus comprising: a device for comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; a device for selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; and a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if the received C/I is greater than the first threshold.

The present invention is directed to a method and apparatus for increasing a channel adaptation speed and as a result, increasing throughput in both a link adaptation and an ARQ mobile telecommunication system.

The Examiner concedes that Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner states that Piirainen teaches automatic repeat request to request a retransmission of the corrupted data, and that Piirainen discloses, in col. 1, lines 28-38, that the

receiver sends a NAK signal to request a retransmission of a coded signal block detected in error and the receiver sends an ACK signal to acknowledge a correct reception. The Examiner asserts that it would have been obvious to modify Padovani to include the alleged suggestions of Piirainen.

Padovani describes a method and apparatus for high rate packet data transmission. Data transmission on the forward link is time multiplexed and the base station transmits at the highest data rate supported by the forward link at each time slot to one mobile station. The data rate is determined by the largest C/I measurement of the forward link signals as measured at the mobile station. Piirainen describes a bidirectional ARQ apparatus and method.

As conceded by the Examiner, Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner alleges that termination of retransmission is disclosed in Piirainen in col. 1, lines 28-38.

Piirainen describes three conventional ARQ strategies including (i) Stop-and-Wait, (ii) Go-Back-N (GBN), and (iii) Selective Repeat. Piirainen teaches against the use of the Stop-and-Wait strategy because the efficiency of transmission is low since a confirmation of the received signal is made for every block of data. Furthermore, one skilled in the art would not be motivated to use the Stop-and-Wait strategy because higher delays can occur even when acknowledgement immediately follows data blocks.

As discussed above Piirainen teaches against the GBN strategy because data blocks are retransmitted starting from the missing data block, including data blocks that were received correctly. Accordingly, one skilled in the art would not be motivated to use the GBN strategy because the GBN strategy makes inefficient use of the wireless medium and it is possible for data blocks that are successfully received to get retransmitted multiple times merely because a previous data block failed more than once.

Piirainen teaches against the Selective Repeat strategy because the management of the order retransmitted data blocks is more complicated for the Selective Repeat strategy compared to other systems. For example, the receiver has to buffer out-of-order data blocks so they can be delivered to higher orders in order.

Piirainen fails to supplement the deficiencies of Padovani because Piirainen merely describes a conventional process of automatically requesting retransmission of corrupted data in col. 1, lines 28-38, and nowhere suggests transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet, as recited in the claims.

One skilled in the art would not be motivated to modify Padovani with Piirainen because Piirainen only discloses conventional ARQ strategies that Piirainen expressly teaches against using. Furthermore, Piirainen nowhere suggests, in col. 1, lines 28-38, or anywhere else, a condition for termination of retransmission, such as comparing a C/I with a threshold, as in the present invention, as erroneously purported by the Examiner.

In contrast, the present invention uses received C/I when determining whether to decode data or determining whether to transmit a signal requesting retransmission/termination of retransmission before decoding data. The present invention also selectively checks for errors in the data packet according to whether the received C/I is greater than the first threshold, which is found nowhere in Padovani, Piirainen, or any combination thereof.

The Examiner has failed to establish a *prima facie* case of obviousness of the claims because any combination of Padovani and Piirainen fails to arrive at the recitations in the claims.

More particularly, Padovani, Piirainen, or any combination thereof, fails to teach or reasonably suggest an apparatus for controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the apparatus comprising: a device for comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; a device for selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; and a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if the received C/I is greater than the first threshold, as recited in Claim 37.

Accordingly, independent Claim 37 is allowable over Padovani, Piirainen, or any combination thereof.

While not conceding the patentability of the dependent claims, *per se*, Claims 38-41 are also allowable for at least the above reasons.

The Examiner has failed to establish a *prima facie* case of obviousness of Claims 37-41 for at least these reasons.

6. Claims 47-49 are patentable over Padovani in view of Piirainen

Claims 47-49 were said to be unpatentable over Padovani in view of Piirainen.

Independent Claim 47 relates to a method of controlling the data rate of a mobile station in a base station.

Independent Claim 47 recites, in part, an apparatus for controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the apparatus comprising: a device for comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; a device for selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; a device for determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold; and a device for requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN.

The present invention is directed to a method and apparatus for increasing a channel adaptation speed and as a result, increasing throughput in both a link adaptation and an ARQ mobile telecommunication system.

The Examiner concedes that Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner states that Piirainen teaches automatic repeat request to request a retransmission of the corrupted data, and that Piirainen discloses, in col. 1, lines 28-38, that the receiver sends a NAK signal to request a retransmission of a coded signal block detected in error and the receiver sends an ACK signal to acknowledge a correct reception. The Examiner asserts that it would have been obvious to modify Padovani to include the alleged suggestions of Piirainen.

Padovani describes a method and apparatus for high rate packet data transmission. Data transmission on the forward link is time multiplexed and the base station transmits at the highest data rate supported by the forward link at each time slot to one mobile station. The data rate is

determined by the largest C/I measurement of the forward link signals as measured at the mobile station. Piirainen describes a bidirectional ARQ apparatus and method.

As conceded by the Examiner, Padovani fails to disclose a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet. The Examiner alleges that termination of retransmission is disclosed in Piirainen in col. 1, lines 28-38.

As discussed above, Piirainen describes three conventional ARQ strategies including (i) Stop-and-Wait, (ii) Go-Back-N (GBN), and (iii) Selective Repeat. Piirainen teaches against the use of the Stop-and-Wait strategy because the efficiency of transmission is low since a confirmation of the received signal is made for every block of data. Furthermore, one skilled in the art would not be motivated to use the Stop-and-Wait strategy because higher delays can occur even when acknowledgement immediately follows data blocks.

Piirainen teaches against the GBN strategy because data blocks are retransmitted starting from the missing data block, including data blocks that were received correctly. Accordingly, one skilled in the art would not be motivated to use the GBN strategy because the GBN strategy makes inefficient use of the wireless medium and it is possible for data blocks that are successfully received to get retransmitted multiple times merely because a previous data block failed more than once.

Piirainen teaches against the Selective Repeat strategy because the management of the order retransmitted data blocks is more complicated for the Selective Repeat strategy compared to other systems. For example, the receiver has to buffer out-of-order data blocks so they can be delivered to higher orders in order.

Piirainen fails to supplement the deficiencies of Padovani because Piirainen merely describes a conventional process of automatically requesting retransmission of corrupted data in col. 1, lines 28-38, and nowhere suggests transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet, as recited in the claims.

One skilled in the art would not be motivated to modify Padovani with Piirainen because Piirainen only discloses conventional ARQ strategies that Piirainen expressly teaches against using. Furthermore, Piirainen nowhere suggests, in col. 1, lines 28-38, or anywhere else, a

condition for termination of retransmission, such as comparing a C/I with a threshold, as in the present invention, as erroneously purported by the Examiner.

In contrast, the present invention uses received C/I when determining whether to decode data or determining whether to transmit a signal requesting retransmission/termination of retransmission before decoding data. The present invention also selectively checks for errors in the data packet according to whether the received C/I is greater than the first threshold, which is found nowhere in Padovani, Piirainen, or any combination thereof.

The Examiner has failed to establish a *prima facie* case of obviousness of the claims because any combination of Padovani and Piirainen fails to arrive at the recitations in the claims.

More particularly, Padovani, Piirainen, or any combination thereof, fails to teach or reasonably suggest an apparatus for controlling transmission of a data packet from an AN in an AT of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the apparatus comprising: a device for comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold; a device for selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; a device for determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold; and a device for requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN, as recited in Claim 47.

Accordingly, independent Claim 47 is allowable over Padovani, Piirainen, or any combination thereof.

While not conceding the patentability of the dependent claims, *per se*, Claims 48 and 49 are also allowable for at least the above reasons.

The Examiner has failed to establish a *prima facie* case of obviousness of Claims 47-49 for at least these reasons.

CONCLUSION

Based on at least the foregoing, and as the Examiner has failed to make out a *prima facie* case for an obviousness rejection, the rejections of Claims 1-6, 9-13, 29-34, 37-41 and 47-49 must be reversed.

Accordingly, independent Claims 1, 9, 19, 29, 37 and 47 are allowable over Padovani, Piirainen, or any combination thereof.

Dependent Claims 2-6, 10-13, 30-34, 38-41, 48 and 49 are also allowable over Padovani, Piirainen, or any combination thereof for at least the above reasons.

Dated: March 7, 2008

By: _____

Paul J. Farrell
Reg. No.: 33,494
Attorney for Appellants

THE FARRELL LAW FIRM
333 Earle Ovington Blvd., Suite 701
Uniondale, New York 11553
(516) 228-3565 (tel)
(516) 228-8475/8476 (fax)

PJF/TCS/dr

CLAIMS APPENDIX

Claim 1. (Previously Presented) A method of controlling transmission of a data packet from an access network (AN) in an access terminal (AT) of a mobile telecommunication system where the AN transmits the data packet in successive time slots, each slot having a plurality of data bits, and the AT receives the data packet from the AN, the method comprising the steps of:

comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold;

selectively checking for errors in the data packet in a received time slot according to whether the received C/I is greater than the first threshold; and

transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet after said checking.

Claim 2. (Original) The method of claim 1, further comprising the steps of:

determining whether it is a low data rate using a length of a preamble of the received data packet; and

proceeding further with the comparison step if the determined data rate is the low data rate, wherein the low data rate repeatedly transmits the same packet two times or more.

Claim 3. (Previously Presented) The method of claim 1, further comprising the steps of:

determining a data rate corresponding to the received C/I if errors are found in the data packet in the error check; and

requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 4. (Previously Presented) The method of claim 1, further comprising the steps of:

determining a data rate corresponding to the received C/I if the received C/I is equal to or less than the first threshold; and

requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 5. (Previously Presented) The method of claim 1, further comprising the steps of:

comparing the received C/I with a predetermined second threshold if the received C/I is equal to or less than the first threshold; and

transmitting the signal requesting termination of retransmission of the data packet to the AN if the received C/I is less than the second threshold.

Claim 6. (Previously Presented) The method of claim 5, further comprising the steps of:

determining the data rate corresponding to the received C/I if the received C/I is equal to or greater than the second threshold; and

requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 7. (Original) The method of any of claims 1,4 or 5, wherein the first threshold is calculated by accumulating a C/I corresponding to the data rate of the current data packet as many times as the maximum number of the data packet transmissions.

Claim 8. (Previously Presented) The method as claimed in either of claims 5 or 6, wherein the second threshold is calculated by dividing the received C/I corresponding to a current data rate by a predetermined margin and multiplying the number of already transmitted slots for the current data packet.

Claim 9. (Previously Presented) A method of controlling transmission of a data packet from an access network (AN) in an access terminal (AT) of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the method comprising the steps of:

comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold;

selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; and

transmitting a signal requesting termination of retransmission of the data packet to the AN if the received C/I is greater than the first threshold.

Claim 10. (Original) The method of claim 9, further comprising the steps of:

determining whether it is a low data rate using a length of a preamble of the received data packet; and

proceeding further with the comparison step if the determined data rate is the low data rate, wherein the low data rate repeatedly transmits the same packet two times or more.

Claim 11. (Previously Presented) The method of claim 9, further comprising the steps of:

determining a data rate corresponding to the received C/I if the received C/I is equal to or less than the first threshold; and

requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 12. (Previously Presented) The method of claim 11, further comprising the steps of:

comparing the received C/I with a predetermined second threshold if the received C/I is equal to or less than the first threshold; and

transmitting the signal requesting termination of retransmission of the data packet to the AN if the received C/I is less than the second threshold.

Claim 13. (Previously Presented) The method of claim 12, further comprising the steps of:

determining the data rate corresponding to the received C/I if the received C/I is equal to or greater than the second threshold; and

requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 14. (Original) The method of any of claims 9 to 13, wherein the first threshold can be calculated by accumulating a C/I corresponding to the data rate of the current data packet as many times as the maximum number of data packet transmissions.

Claim 15. (Previously Presented) The method as claimed in either of claims 12 or 13, wherein the second threshold is calculated by dividing the received C/I corresponding to a current data rate by a predetermined margin and multiplying the number of already transmitted slots for the current data packet.

Claims 16-18 (Canceled)

Claim 19. (Previously Presented) A method of controlling transmission of a data packet from an access network (AN) in an access terminal (AT) of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the method comprising the steps of:

comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold;

selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold;

determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold; and

requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN.

Claim 20. (Original) The method of claim 19, further comprising the steps of:

determining whether it is a low data rate using a length of a preamble of the received data packet; and

proceeding further with the comparison step if the determined data rate is the low data rate, wherein the low data rate repeatedly transmits the same data packet two times or more.

Claim 21. (Previously Presented) The method of claim 19, further comprising the steps of:

comparing the received C/I with a predetermined second threshold if the received C/I is equal to or less than the first threshold;

determining the data rate corresponding to the received C/I if the received C/I is equal to or greater than the second threshold; and

requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 22. (Original) The method of any of claims 19 to 21, wherein the first threshold is calculated by accumulating a C/I corresponding to the data rate of the current data packet as many times as the maximum number of data packet transmissions.

Claim 23. (Previously Presented) The method of claim 21, wherein the second threshold is calculated by dividing the received C/I corresponding to a current data rate by a predetermined margin and multiplying the number of already transmitted slots for the current data packet.

Claim 24-28 (Canceled)

Claim 29. (Previously Presented) An apparatus for controlling transmission of a data packet from an access network (AN) in an access terminal (AT) of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the apparatus comprising:

a device for comparing a C/I of a forward pilot signal received from the AN with a predetermined first threshold;

a device for decoding a data packet in a received time slot and selectively checking for errors in the decoded data packet according to whether the received C/I is greater than the first threshold; and

a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if no errors are found in the data packet.

Claim 30. (Original) The apparatus of claim 29, wherein the comparator detects the length of the data preamble of the received time slot, determines whether that is the low data rate and performs the comparison if the determined data rate is a low data rate, wherein the low data rate repeatedly transmits the same data packet two times or more.

Claim 31. (Previously Presented) The apparatus of claim 29, further comprising:

a device for determining a data rate corresponding to the received C/I if errors are found in the decoded data packet; and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 32. (Previously Presented) The apparatus of claim 31, further comprising:

a device for determining a data rate corresponding to the received C/I if the received C/I is equal to or less than the first threshold; and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 33. (Previously Presented) The apparatus of claim 31, further comprising:

a device for comparing the received C/I with a predetermined second threshold if the received C/I is equal to or less than the first threshold; and

a device for transmitting the signal requesting termination of retransmission of the data packet to the AN if the received C/I is less than the second threshold.

Claim 34. (Previously Presented) The apparatus of claim 33, further comprising:

a device for determining the data rate corresponding to the received C/I if the received C/I is equal to or greater than the second threshold; and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 35. (Original) The apparatus of any of claims 29 to 34, wherein the first threshold is calculated by accumulating a C/I corresponding to the data rate of the current data packet as many times as the maximum number of data packet transmissions.

Claim 36. (Previously Presented) The apparatus as claimed in either of claims 33 or 34, wherein the second threshold is calculated by dividing the received C/I corresponding to a current data rate by a predetermined margin and multiplying the number of already transmitted slots for the current data packet.

Claim 37. (Previously Presented) An apparatus for controlling transmission of a data packet from an access network (AN) in an access terminal (AT) of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the apparatus comprising:

a device for comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold;

a device for selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold; and

a device for transmitting a signal requesting termination of retransmission of the data packet to the AN if the received C/I is greater than the first threshold.

Claim 38. (Original) The apparatus of claim 37, wherein the comparator detects the length of the data preamble of the received time slot, determines whether that is the low data rate and performs the comparison if the determined data rate is a low data rate, wherein the low data rate repeatedly transmits the same data packet two times or more.

Claim 39. (Previously Presented) The apparatus of claim 37, further comprising:

a device for determining a data rate corresponding to the received C/I if the received C/I is equal to or less than the first threshold; and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 40. (Previously Presented) The apparatus of claim 37, further comprising:

a device for comparing the received C/I with a predetermined second threshold if the received C/I is equal to or less than the first threshold; and

a device for transmitting the signal requesting termination of retransmission of the data packet to the AN if the received C/I is less than the second threshold.

Claim 41. (Previously Presented) The apparatus of claim 40, further comprising:

a device for determining a data rate corresponding to the received C/I if the received C/I is equal to or greater than the second threshold; and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 42. (Original) The apparatus of any of claims 37 to 41, wherein the first threshold is calculated by accumulating a C/I corresponding to the data rate of the current data packet as many times as the maximum number of data packet transmissions.

Claim 43. (Previously Presented) The apparatus as claimed in either of claims 40 or 41, wherein the second threshold is calculated by dividing the received C/I corresponding to a current data rate by a predetermined margin and multiplying the number of already transmitted slots for the current data packet.

Claims 44-46 (Canceled)

Claim 47. (Previously Presented) An apparatus for controlling transmission of a data packet from an access network (AN) in an access terminal (AT) of a mobile telecommunication system where the AN transmits the data packet in successive time slots each having a plurality of data bits and the AT receives the data packet from the AN, the apparatus comprising:

a device for comparing a received C/I of a forward pilot signal received from the AN with a predetermined first threshold;

a device for selectively checking for errors in the data packet according to whether the received C/I is greater than the first threshold;

a device for determining a data rate corresponding to the received C/I if the received C/I is less than or equal to the first threshold; and

a device for requesting retransmission of the data packet to the AN by transmitting the determined data rate to the AN.

Claim 48. (Original) The apparatus of claim 47, wherein the comparator detects the length of the data preamble of the received time slot, determines whether that is the low data rate and performs the comparison if the determined data rate is a low data rate, wherein the low data rate repeatedly transmits the same data packet two times or more.

Claim 49. (Previously Presented) The apparatus of claim 47, further comprising:

a device for comparing the received C/I with a predetermined second threshold if the received C/I is equal to or less than the first threshold;

a device for determining the data rate corresponding to the received C/I if the received C/I is equal to or greater than the second threshold; and

a device for requesting retransmission of the data packet by transmitting the determined data rate to the AN.

Claim 50. (Original) The apparatus of any of claims 47 to 49, wherein the first threshold is calculated by accumulating a C/I corresponding to the data rate of the current data packet as many times as the maximum number of data packet transmissions.

Claim 51. (Previously Presented) The apparatus of claim 49, wherein the second threshold is calculated by dividing the received C/I corresponding to a current data rate by a predetermined margin and multiplying the number of already transmitted slots for the current data packet.

Claim 52-56 (Canceled)

EVIDENCE APPENDIX

There is no evidence submitted pursuant to 37 C.F.R. § 1.130, 1.131, 1.132 or entered by the Examiner and relied upon by Appellants.

RELATED PROCEEDINGS APPENDIX

There are no known decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 C.F.R. § 41.37.